Bird Track Springs Fish Enhancement Project
Heritage Resources
Specialist Report

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Heritage Resources

Introduction

This section discusses the existing conditions and effects of implementation of the Bird Track Springs project on cultural resources, also known as heritage resources, which are integral facets of the human environment. The term "cultural resources" encompasses a variety of resource types, including archaeological, historic, ethnographic and traditional sites or places. These sites or places are non-renewable vestiges of our Nation's heritage, highly valued by Tribes and the public as irreplaceable, many of which are worthy of protection and preservation. Related cultural resource reports and analyses can be found in the Bird Track Springs Analysis File.

Affected Environment

Pre-Contact History

The Upper Grande Ronde River Basin lies within the Southern Plateau culture area. The term "culture area" refers to an area or region in which the Tribal peoples who lived there were more similar to one another than to Tribes that inhabited other regions. The Tribes within a culture area might share similar clothing styles, foods, customs, stories, myths, beliefs, and languages. Inter-marriage and similar family organizational systems are also common within a culture area. While the Southern Plateau was inhabited by Sahaptin speakers with different historical origins, there were strong cultural similarities between the groups. These similarities may have been due to several factors, including similar subsistence adaptations and technologies, art and rituals, and shared behaviors, styles and materials that were maintained by regular interactions and exchanges between community groups (Hayden and Schulting 1997:51-52).

Archaeological investigations have revealed that people living in the Southern Plateau area have practiced a seasonal round of subsistence for thousands of years that kept them moving throughout the land over the course of the year. The seasonal round movements responded to the rhythms of nature and took them from fishing camps and plant procurement sites at low elevations to berry-picking sites and hunting camps high in the mountains. Through evidence collected in their work, archaeologists have noted that the pre-contact history of the Southern Plateau can be divided into three general periods:

- Period I (11,5000 years ago to about 5,000-4,400 years before present [BP])
- Period II (4,400 BP-1,900 BP)
- Period III (1,900 BP – A.D. 1720)

As described by Ames et al. (1998:103-119), and summarized in the Bird Track Springs Heritage Resources Report (ICF, 2017), these periods are distinguished by similarities in material remains over time, and period transitions are denoted by substantial changes in materials (in either quantity or type). Period I is characterized by stemmed, leaf-shaped and side-notched projectile points (spear and atlatl dart points), and people utilizing this area during Period I were characterized by high seasonal mobility, low population densities, and a technology geared to maximum flexibility. Period II is marked by changes in settlement and subsistence strategies that may have been spurred by changes in climate and environmental conditions. More permanent habitation types are seen at the beginning of Period II in semi-subterranean pit houses, and there is an increased reliance on root crops and anadromous fish. Period III is characterized by the florescence of the winter village pattern, and intensive reliance on root crops and anadromous fish. Seasonal mobility continues to dictate subsistence and cultural activities during this period. The horse appears near the end of this period and takes the Southern Plateau into the historic era.

More specific to the project area, archaeological evidence exists that supports the presence of pre-contact peoples, most likely for subsistence and resource procurement. The Grande Ronde River and tributary streams could support significant runs of salmon and steelhead. According to the Watershed Professional Network, LLC (2004), the Grande Ronde River constitutes "key habitat" for spring Chinook and steelhead. Beginning in the early spring, fish runs last into August. As for big game species, faunal assemblages from archaeological sites in northeastern Oregon tend to be dominated by deer and bighorn sheep. Both of these animals would have been available in the foothills surrounding the Grande Ronde valley in which this project area is located.

Root crops would have also been plentiful in the area. Camas (*Cammassia* spp.) and cous (*Lomatium* spp.) can still be found in the valley and foothills beyond. Evidence of camas processing was recovered from the Marsh Meadows Site (McPherson et al. 1981). High quality basalt and andesite sources are also located throughout the valley. Evidence of quarrying has been found relatively nearby at both the Marsh Meadow Site and the Stockhoff Basalt Quarry (McPherson et al. 1981; Womack 1977) along the valley margins.

Post-Contact History

Euro-American explorers such as David Thompson, Benjamin De Bonneville, Nathaniel Wyeth, David Douglas, and John C. Fremont first entered the Grande Ronde valley as early as 1811. Two additional expeditions soon followed (Edvalson Almquist et al. 1996). Shortly thereafter, The Hudson's Bay Company, a prominent English operation, brought fur trading to the area and quickly began over-trapping beaver in the Wallowa's in order to discourage American fur companies from crossing the Rockies. However, this strategy was unsuccessful and American trappers swarmed into the region, resulting in a nearly depleted beaver population along the river by 1830 (Bureau of Reclamation 2014).

Very few others settled in the area until the 1850s and 1860s when pioneers on the Oregon Trail, a 2,000 mile long wagon road running from Missouri to the Columbia River, crossed over from the Powder River basin in the south and headed west into the Blue Mountains (Duncan 1998). As settlers began to enter the valley, several important roads leading from larger commercial centers to local mining communities were built through the town of Union to the southeast. Many of the early surrounding settlers engaged in the freighting business, yoking their oxen into teams of six and carrying merchandise from The Dalles or Umatilla to the mines around Auburn in Baker County (Barklow 1987).

The increase in Euro-American settlers in the area brought tensions between them and the Indian population already established there. Although the Umatilla Indian Reservation at Grand Ronde had already been established by 1855, many settlers viewed the tribes as trespassers and worked to displace them from the Wallowa Valley and surrounding areas. Due to the discovery of gold and silver as well as placer mining operations active upstream of Camp Carson in the Upper Grande Ronde at the headwaters, the population in the area increased significantly (Bureau of Reclamation 2014).

As settlement pressures increased, treaty amendments were executed, eventually pushing the Umatilla and other Tribes out of the area, and many onto the reservations (Duncan 1998; Oregon Historical Society 1960). By 1869, with the completion of the transcontinental railroad, the Oregon Trail became mostly obsolete and emigrants were able to settle in the area with more ease and in larger numbers. The railroad also opened up the market for farmers to export their goods to the growing city of Portland.

Irrigation development began to take place during the 1870s in the Grande Ronde valley first at rich alluvial lands along the river and feeder streams, then up into drylands when alluvial grasslands were depleted. Many canals and crude ditches were dug extending away from emerging mountain streams in order to support settlers' crops and livestock (Duncan 1998). Farming crops and livestock proved to be a

suitable way of life in the valley; however, old growth firs and pine seemed to offer an endless supply of wood. Therefore, many sawmills sprouted all over Union County and logging quickly became the lucrative industry (Turner 2005).

The establishment of the national forests in eastern Oregon played an important role in the local economy of the area. During the early twentieth century, roads, campgrounds, and trails were constructed for recreation and resource extraction. The Wallowa National Forest, which encompasses portions of the area of potential effect (APE) for this project, was created in 1908 from the combination of seven forest reserves and the Whitman National Forest was created the same year from the combination of three forest reserves. These forests, located in Idaho, Washington, and Oregon have been managed together since 1954 and are known as the Wallowa-Whitman National Forest consisting of 2.3 million acres ranging from the Blue Mountains and Wallowa Mountains down to the Snake River on the Idaho border, which includes the Hells Canyon National Recreation Area (National Forest Foundation 2017).

Ethnography

Oregon's Plateau Indians included the Wasco, Wishram, Warm Springs (or Tenino), John Day, Cayuse, Umatilla, and Nez Perce, and the associated Walla Walla along the Columbia River. They lived from the Cascade Mountains to the Wallowas, from the margins of the rivers to summer camps at high elevations. "In historic times, the Umatilla and Walla Walla occupied riverine tracts along the Columbia and the lower courses of tributary streams, including Willow Creek and Umatilla River for the former, and the Walla Walla and Snake rivers for the latter… The Cayuse homeland extended along the upper courses of the Umatilla and Walla Walla rivers, as well as that of the Grande Ronde, a tributary of the Snake River that takes its name from the large oval prairie in which it lies" (Stern 1998). The upland slopes that drain into the Powder River located to the south of the Grande Ronde Valley and the headwaters of the Grande Ronde River, located west of the valley are considered to lie within the territory exploited by the Cayuse Indians (Ray et al. 1938). According to early 20th century accounts, the Grande Ronde Valley was reported to have been jointly occupied by the Umatilla and Nez Perce Indians (Spinden 1908).

The Plateau Tribes occupied a challenging environment. Summers were hot and windy; winters were cold and windy. The lodges to shelter human activities thus varied over the year from pole-frame, mat-covered summer encampments to semi-subterranean pit houses, framed with a cone of rafters covered with brush and earth to provide a refuge from the winter conditions. In spite of its harshness the region abounded in life. The Columbia and its tributaries--Deschutes, John Day, Umatilla, Snake, Grande Ronde, and Owyhee--were filled with fish that not only fed the people, but also brought groups together for trade and socializing. Following annual ceremonies, the women harvested the roots of wild celeries, camas and cous (*Lomatium* spp.), gathered nutritious moss, and picked huckleberries in the nearby mountains. The men hunted deer to secure meat and hides to tan for clothing and moccasins.

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR), a proponent of this project, are the primary Tribes with interest in *Ka Katla*, the Grande Ronde Valley (Steinmetz 2003). The CTUIR is a union of three Tribes: Cayuse, Umatilla, and Walla Walla, the latter two of which were riverine tribes (Stern 1998). In 1855, the three Tribes signed a treaty with the U.S. government, in which it ceded over 6.4 million acres to the United States. In the treaty, the Tribes reserved rights to fish, hunt, and gather foods and medicines within the ceded lands, which today is northeastern Oregon and southeastern Washington. The Grande Ronde Valley lies within the ceded CTUIR treaty lands. Tribal members still exercise and protect those rights today.

Water plays a central role in Tribal life and "represents an integral link in a world view where water is sacred and extremely important to preserving precious balance – water is the origin of and essential for

the survival of all life" (CTUIR 2017). The river system of the Southern Plateau was the lifeblood of the Walla Walla, Umatilla, and Cayuse and it linked many different people by trade, marriage, conflict, and politics. The people fished, traded, and traveled along the river in canoes. The river people were tied with other Tribes along the river with closely related family, trade, and economic interests in the Columbia River Gorge and the Northern Plateau. The current project, which would restore habitat for fish, would play a small part in continuing the lifeways and traditions of the CTUIR Tribes.

The Mount Emily Railroad Grade

Located within the APE is a portion of the Mount Emily Railroad Grade which has been determined to be a historic property eligible for listing in the National Register of Historic Places. The Mount Emily Timber Company, later known as the Mt. Emily Lumber Company was founded in 1912 by the Kinzel family and August J. Stange, son of August H., a master millwright, sash and door manufacturer from Wisconsin. The company was formed to acquire and hold timberlands in Oregon, although it had not yet moved west. This was a trend during the teens and twenties as the timber supply throughout the rest of the country was dwindling. August H. was already using lumber from mills in eastern Oregon for his sash and door business and when the timber supply became scarce in Wisconsin, he sent his son, August J. to La Grande to purchase land and timber and in 1924 the business moved west and became the basis for the La Grande sawmill.

The new modern sawmill was equipped with a 3-band system and drying facility, along with a complete remanufacturing and finishing plant. The capacity of the La Grande sawmill was 50 million board feet per year (Powell 2008). With its modern sawmill, the company quickly became the technological leader in timber harvesting, transportation, milling operations, and nationwide marketing (Turner 2005). The main hauling route for Mt. Emily's railroad at the time was at Hilgard up Five Points Creek where the company was logging National Forest timber (Deumling 1972). The town of Hilgard near Hilgard Junction, 2.5 miles east of the APE, was a thriving community since the 1880s, serving miners, loggers, and stockmen and had one of the earliest sawmills in the Grande Ronde area owned by Daniel Chaplin (Bureau of Reclamation 2014).

The Mt. Emily Lumber Company began construction on a logging railroad from the Union Pacific mainline eight miles west of La Grande and in 1925 purchased the Grande Ronde Lumber Company logging railroad. The mainline railroad route extended approximately 30 miles to the southwest of La Grande. The company replaced the outdated engines with geared locomotives and continued to expand the logging railroad farther west (Turner 2005). This included a spur line up Whiskey Creek and railroad from Hilgard along the Grande Ronde River and over the Blue Mountains to the mouth of Camas Creek about 18 miles from Ukiah (Deumling 1972).

A number of logging camps developed along the length of the railroad, changing position over the years as timber was thinned out in one area and it became necessary to move closer to the more plentiful resource procurement locations. Camp houses were box cars that were movable so that they could be placed on flat cars and relocated by rail to a new campsite, although by 1935 it was decided that the Mt. Emily Camp, the primary camp, would remain at the Meadow Brook Creek site (south of the APE). In light of that news, many people added on to their houses. Most yards had small chicken coops, a privy, and a cellar for refrigeration built into the hillside (Turner 2005). The Mt. Emily Camp became the focal point for logging in Union County (Skovlin 1991).

Sometime in the 1930s, the company shifted from rail logging to truck logging. The shift to truck logging was mainly due to financial and practical advantages of trucks being able to climb steeper grades and access previously inaccessible mountainsides. Trucks also helped eliminate the fire hazard that flying cinders presented from the locomotives. Horse teams were used to skid and bunch logs to truck roads

except for uphill skids, which were completed using tractors. Tractor technology became widely available around 1930; however, it was expensive therefore horses were still used on flat areas as a more cost effective alternative (Powell 2008). Although the railroad mainline remained in use at the time, Mt. Emily Lumber began building truck roads out to the harvest sites rather than rail spurs (Trainweb 2016).

The last railroad for the Mt. Emily operation was constructed in 1936 by Morrison and Knudson of Idaho. It was used in conjunction with the truck logging operation that sent trucks to the forest to haul logs down to the railroad and then be transported to the mill in La Grande (Deumling 1972). During 1937, it was reported that the Mt. Emily Lumber Company had over 30 miles of railroad track in use, 75 miles of truck roads, and operating 20 diesel trucks and three locomotives. The company bought out the Oregon White Pine Lumber Company of La Grande the following year, which already had 42 miles of railroad from Enterprise to Flora in northern Union county (Deumling 1972). In 1944, a six mile extension was added to the railroad, lifting it out of the Grande Ronde River watershed and into the John Day River watershed. After this extension, there were no additional changes or updates to the railroad and it remained the same for the remainder of its existence.

The Wallowa-Whitman National Forest has been working to document the segments of this grade that exist on Forest Service lands, and at least one segment on private land has also been recorded. In the general Bird Track project area, the segments on Forest land in T3S R36E Sections 11, 14, and 16 have been identified as contributing elements to the overall eligibility of the resource.

Effects Analysis

The Bird Track Springs Project heritage resources analysis area encompasses all of the approximately 6,000-acre project area of potential effect (APE). The APE, following Region 6 guidance and 36 CFR 800.16(d), for the Bird Track Springs Project area consists of a segment of the Grande Ronde River and an upland area defined for wood procurement. Reclamation assumed oversight of the cultural resources fieldwork, as outlined in the Statement of Principles between the project proponents, and contracted with ICF, International for completion of the necessary work, outlined below. A qualified archaeologist (as defined by the Oregon SHPO) supervised all fieldwork as per the contract requirements.

Identification of Heritage Resources

The methodology for identifying heritage resources in the APE was established in an Inventory Plan prior to commencement of the work. The Inventory Plan was agreed to by SHPO and CTUIR. First, ICF personnel conducted a review of existing data related to previously identified cultural resources and the investigations that focused on cultural resource discovery and evaluation. Five previous archaeological surveys were found to have been conducted at least partially within the project APE, and six surveys had been conducted within a one-mile radius of the APE boundary. Three previously recorded archaeological sites within the APE and thirteen sites located within one mile of the APE were noted. Six of these sites are historic period sites (e.g. can dumps, sheep pens, historic homestead), while eight are pre-contact sites (primarily lithic scatters) and one is potentially multi-component (involving both pre-contact and post-contact/historic artifacts). The majority of these sites are unevaluated for significance. No traditional cultural properties have been identified in this area by the Tribes to the other project proponents.

The measure of significance of the heritage resources follows the National Historic Preservation Act (NHPA) regulations at 36 CFR § 800.4 through the National Park Service's National Register Bulletin 15, "How to Apply the National Register Criteria for Evaluation." These criteria are standards applied in evaluating the wide range of properties that may be significant in local, State, and national history, and clarifies whether a particular property qualifies for the National Register of Historic Places. Properties that do qualify are termed "historic properties" within NHPA (and utilized here). Agencies are then obligated to take into account the effects of their project activities on those significant heritage resources,

and must mitigate effects that are adverse. Evaluation of the sites within the APE have are undertaken by qualified cultural resource staff of project proponent Bonneville Power Administration (BPA) as part of the Section 106 consultation effort, as outlined in the Statement of Principles agreed to by all project proponents at the beginning of this project. ICF will provide recommendations of site eligibility based upon the data they collected.

ICF performed pedestrian survey over the entire APE (including the wooded uplands) in 20 m or less transects, following Oregon SHPO fieldwork standards and Wallowa-Whitman National Forest survey guidelines. Pedestrian survey was accomplished over 6,083 acres. Discovered artifacts on the surface were documented, photographed and GPSed. In addition, shovel test survey was conducted along the riverine setting of the APE where ground disturbance would be widespread, a total of 191 acres. Shovel test survey excavation methods followed the recommended state standards described in the Guidelines for Conducting Field Archaeology in Oregon (2016), developed by the Oregon SHPO. This included excavation of 30 cm diameter shovel probes to a depth of 100 cm below surface or until an obstruction was reached. Probes were placed on a regular grid at intervals of 20 m. All material was screened through 0.25-inch or smaller mesh. More than 2,000 shovel probes (Table 1) were excavated, assessed, and backfilled after completion.

Table 1. Summary of shovel probes performed in Bird Track Springs APE

Shovel Probe Type	Number of Shovel Probes	Percentage of Total
Positive for Heritage Resources	33	1.6%
Negative for Heritage Resources	1,688	83.5%
Shovel Probe Planned but Not Dug	301	14.9%
Totals:	2,022	100%

Through the methods identified above, the ICF crews discovered 30 isolated heritage resource finds and 28 heritage resource sites[1]. Sites were defined according to Oregon state standards (a locale containing 10 or more artifacts within a 50-meter boundary), with finds containing fewer than 10 artifacts discovered in a location that appear to reflect a single event, loci, or activity being categorized as isolates. Isolated finds are generally restricted to surface artifacts and lack subsurface components. Because of this, isolated finds are rarely considered significant or meet the criteria necessary to qualify as eligible for listing in the National Register of Historic Places. The newly discovered isolates and sites within the project area are outlined briefly in Tables 2 and 3. Site types include pre-contact chipped stone and artifact scatters, an historic cabin, historic artifact scatters, and a section of an historic military firing range. Isolated find types were largely pre-contact chipped stone artifacts and historic debris.

Impacts to Significant Heritage Resources

The sites that have been identified within the APE that are preliminarily recommended as eligible historic properties include pre-contact lithic scatters, a possible logging camp or historic habitation area, the Mount Emily Railroad Grade, and a firing range. The project activities would be able to avoid impacting all of these potentially eligible sites (project activities would occur outside of site boundaries) except for the Mount Emily Railroad Grade. A description of that resource is included above under the Affected Environment. Information about this railroad grade is also located in the survey report, which is to be used by cultural resource specialists to evaluate these resources for eligibility.

[1] At the time of the drafting of this heritage resources section, the data received from ICF was considered preliminary. Further analysis of the data may change the numbers or categories of isolated finds and/or heritage resource sites.

Table 2. List of heritage resource isolated finds within the Area of Potential Effects.

Field Resource ID	Description	Time Period	NRHP Eligibility
B2-MH-09	Lithic flake	Pre-contact	Not Eligible
B2-MS-08	Lithic flake	Pre-contact	Not Eligible
B2-MS-10	Bottle	Historic	Not Eligible
BT-ARM-001	Springboard cutout in tree stump	Historic	Not Eligible
BT-ARM-002	Projectile point	Pre-contact	Not Eligible
BT3-ARM-014	Small refuse scatter	Historic	Not Eligible
BT3-ARM-018	Lithic flake	Pre-contact	Not Eligible
BT3-ARM-019	Small refuse scatter	Historic	Not Eligible
BT3-ARM-020	One-knife-opened can with wire	Historic	Not Eligible
BT3-ARM-021	One-knife-opened can	Historic	Not Eligible
BT3-KY-002	Railroad rails on graded surface	Historic	Not Eligible
BT3-KY-003	Projectile Point Fragment	Pre-contact	Not Eligible
BT3-KY-005	Historic refuse scatter	Historic	Not Eligible
BT3-MS-001	Bottle	Historic	Not Eligible
BT3-MS-002	Bottle	Historic	Not Eligible
BT3-TF-003	Small refuse scatter	Historic	Not Eligible
BT4-ARM-006	Lithic scatter	Pre-contact	Not Eligible
BT4-KY-004	Bottle	Historic	Not Eligible
BT4-MES-002	Stove pipe	Historic	Not Eligible
BT4-TU-003	Bottle	Historic	Not Eligible
BT5-KY-001	Refuse scatter	Historic	Not Eligible
KY-006	Lithic flake	Pre-contact	Not Eligible
KY-011	Lithic flake	Pre-contact	Not Eligible
PWR-04	Glass fragment	Historic	Not Eligible
PWR-06	Lithic scatter	Pre-contact	Not Eligible
PWR-07	Lithic scatter	Pre-contact	Not Eligible
PWR-103	Lithic scatter	Pre-contact	Not Eligible
PWR-105	Lithic scatter	Pre-contact	Not Eligible
TF001	Bottle	Pre-contact	Not Eligible
BT1-ISO-4	Lithics	Pre-contact	Not Eligible

Table 3. List of newly discovered heritage resource sites within the Area of Potential Effects.

Field Resource ID	Description	Time Period	Preliminary NRHP Eligibility Recommendation
BT2-Site-1-MC	Historic and lithic scatter	Multicomponent	Eligible
BT2-Site-3	Lithic scatter	Pre-contact	Eligible
BT3-ARM-007	Historic scatter with livestock enclosure	Historic	Eligible
BT3-ARM-017	Lithic scatter	Pre-contact	Eligible
BT3-KY-004	Large historic refuse scatter	Historic	Eligible
BT3-MES-001	Lithic scatter	Pre-contact	Eligible
BT3-SO-001	Lithic scatter	Pre-contact	Eligible
BT3-TF-001	Large historic refuge scatter	Historic	Eligible
BT3-TF-002	Large historic refuse scatter	Historic	Eligible
BT3-TF-004	Large historic refuse scatter	Historic	Eligible
BT4-ARM-001	Lithic and historic refuse scatter	Multicomponent	Eligible
BT4-ARM-002	Lithic scatter	Pre-contact	Eligible
BT4-ARM-003	Lithic scatter	Pre-contact	Eligible
BT4-LA-001	Lithic scatter	Pre-contact	Eligible
BT4-LS-001	Large lithic scatter	Pre-contact	Eligible
BT4-LS-002	Lithic scatter	Pre-contact	Eligible
BT4-LS-003	Lithic scatter	Pre-contact	Eligible

Field Resource ID	Description	Time Period	Preliminary NRHP Eligibility Recommendation
BT4-KY-001	Lithic scatter	Pre-contact	Eligible
BT4-MRS-001	Large lithic scatter	Pre-contact	Eligible
BT4-TU-002	Lithic scatter	Pre-contact	Eligible
BT5-Site-001	Components of historic military firing range	Historic	Eligible
KY-008	Lithic scatter	Pre-contact	Eligible
KY-012	Log cabin	Historic	Eligible
KY-013	Lithic scatter	Pre-contact	Eligible
BOR1	Historic scatter, non-diagnostic	Historic	Not Eligible
BT4-MES-003	Historic refuse scatter	Historic	Not Eligible
BT-H1	Historic refuse scatter, non-diagnostic	Historic	Not Eligible

Treatment of Heritage Resources

The Preservation Plan for the Mt. Emily Lumber Company, an historic context created by La Grande Ranger District of the Wallowa-Whitman National Forest, specifies that segments of the Mt. Emily Railroad grades "which are still intact" should receive "protection only" (Mead and Ruth n.d.) where protection is defined as the act or process of applying measures designed to affect the physical condition of the property by defending or guarding it from deterioration, loss or attack, or to cover or shield the property from danger or injury. The phrase "protection only" precludes such actions as rehabilitation or reconstruction.

Direct and Indirect Effects on Heritage Resources

Alternative 1 – No Action Alternative

Under this alternative, no effects would occur and no treatment activities would be undertaken.

Alternative 2 – Proposed Action

Avoided Historic Properties

Criteria built into the design of the action alternative (refer to Management Requirements, Constraints, Design Criteria, and Conservation or Mitigation Measures section of this EA) provides protection of all known historic properties eligible for listing on the National Register (per 36CFR800) within the project area through avoidance, with the exception of the eligible Mount Emily Railroad Grade (discussed below). Due to these avoidance measures requiring actions would occur outside of known site boundaries all other known heritage resources within the project area would not experience direct impacts from project activities or outcomes.

Indirect effects on the heritage resources located near the river may take place as the setting of the resources would change slightly by the relocation or construction of new river channels. However, these indirect effects would not diminish or remove the qualities of these resources that make them important. The heritage resources located in the forested uplands would likely not experience indirect effects once the project activities are complete due to the fact that they are located on private land and would not be subject to frequent visitation, either explicit or inadvertent.

Mount Emily Railroad Grade

The Mount Emily Railroad Grade, which runs the length of the APE, would be directly affected by project activities. These intact segments meet eligibility criteria and are considered contributing elements to a larger Mt. Emily Lumber Railroad Grade historic property. The effects of this project on the resource would be direct. At the southwest end of the project area just beyond where a railroad bridge once connected the grades on either side of the river, the downstream grade would be leveled under this alternative to shape the river bank and place large woody materials instream. Along the portion of the grade that runs parallel to the highway, at least one breach of the grade would occur to allow for equipment access into the flats. The upstream section of the grade that turns and continues to the northeast may be used as an access road to allow equipment to gain entry to that part of the APE.

As per the Section 106 regulations, a Memorandum of Agreement (MOA) has been developed in consultation with the Oregon SHPO, the CTUIR, BPA, the Wallowa-Whitman National Forest, and the Bureau of Reclamation. This mitigation MOA outlines measures that would be taken to avoid, minimize, or mitigate the adverse effect, thereby resolving (through agreement) the direct impacts according to 36 CFR 800.6. Mitigation cannot, and is not intended to, fully compensate for damage to or the loss of irreplaceable historic resources. Instead, mitigation is an opportunity for Federal agencies to preserve and document the past for the public's education and appreciation. Mitigation is project-specific, takes into account the current and future impact(s) of the project, and the needs of the local community (Oregon Parks and Recreation Department 2017). Mitigation efforts are described at length in the Section 106 Mitigation MOA (Appendix E of the EA). Activities would include some or all of the following: documenting historic resources before they are demolished; creating websites, displays, and brochures; holding public education events; etc. The Section 106 process requires mitigation efforts be commensurate with the scale of the adverse effects.

Indirect effects to this segment of the railroad grade would be considered as a diminishment of its overall physical and historic integrity, and could encourage more complete documentation and preservation of other intact segments outside this APE.

The impacts to the Mt. Emily Railroad Grade are considered adverse effects under the National Historic Preservation Act (NHPA), but under NEPA, the significance of the likely environmental impacts is considered low. This is due to the lack of intensity of the removal of small portions of the grade when measured against the NEPA variables. The removal of small portions of the grade would not affect public health or safety or cause controversy on environmental grounds; would not cause uncertainty about effects or pose unique risks; would not establish a precedent that would further define the parameters of a further action; would not result in cumulative impacts; would not cause potentially adverse effects on endangered or threatened species or habitat (and would actually benefit fish habitat); and would not cause potential for violation of a Federal, state, or local law or requirement imposed for the protection of the environment. Because the only variable involved in the removal of small portions of the Mt. Emily Railroad Grade would be the adverse effect to the eligible historic property (which would be mitigated), the significance of the impact has been measured and determined to be low.

While the Mt. Emily Lumber Railroad Grade historic property would be directly affected by project activities, these affects would be mitigated as part of the NHPA Sec 106 consultation process to resolve adverse effects. Other known cultural sites in the project area would be avoided and protected from the proposed restoration work. Cultural sites inadvertently discovered during construction would be addressed by an Archaeological/Cultural Resources Inadvertent

Discovery Plan. USFS would monitor project impacts on sites that are or may be eligible for listing on the National Register. In the short term, the project would have a low impact on known cultural resources because the majority of sites would be avoided and because the impact to the Mt. Emily Lumber Railroad Grade would be mitigated. In the long term, indirect effects to this segment of the railroad grade could be considered as a diminishment of its overall physical and historic integrity, and could encourage more complete documentation and preservation of other intact segments outside this APE.

Cumulative Effects on Heritage Resources

Analysis of the present and reasonably foreseeable future activities within the project area were analyzed in Appendix D of this EA to determine which of those activities may overlap in time and space with this project and have the potential to result in a cumulative effect when added to the activities proposed in each of the alternatives.

Alternative 1 – No Action Alternative

Because there would be no activities occurring which could affect heritage resources under this alternative, there would be no potential for cumulative effects to them as a result of selection of the no action alternative.

Alternative 2 – Proposed Action

Cumulative impacts to the avoided heritage resources near the river would be limited to potential changes in human or animal access to the area once the project is completed. Upland, forested sites would likely not experience cumulative impacts while the land ownership remains in private status.

Analysis of the cumulative effects of this project's activities in combination with the present and reasonably foreseeable future activities on the railroad grade indicate that there would not likely be any measureable effects from the activities that overlap in time and space with the remnants of this site.

Forest Plan Compliance

Consideration of the direct, indirect, and cumulative effects on heritage resources results in the finding that Alternatives 1 and 2 would be consistent with the Wallowa-Whitman Land and Resource Management Plan as all cultural resource standards and guidelines for inventory, evaluation, nomination, protection, enhancement (interpretation), resolution of conflicts with other activities (MOA Mitigation Plan), coordination with SHPO and the tribes, and monitoring would be met (USDA Forest Plan 1990).

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